

## Level 2 Requirements - SYM\_ManageMonitorData

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The SYM\_ManageMonitorData function shall maintain a local history of state data and provide this data to the SYM\_Ref function as required. When SYM\_Ref requires data older than that in the local cache, SYM\_Mmd shall obtain the data from the DMG subsystem. Other functionality for SYM\_Mmd is to provide an interface to Data Management Group (DMG) subsystem. This interface manages SYM subsystems requests for archiving of SYM generated products and manages responses received for SYM subsystems for such requests from DMG. SYM\_Mmd currently has following major subfunction: Maintain Local Data Cache (MLDC) and Manage Requests and Responses (MRR).

- 7.1 The Maintain Local Data Cache function shall manage storage in, and retrieval from, a local cache of recent state data. This cache shall contain the most recent TBD minutes of state data. MLDC shall process requests for state data from the SYM\_Ref function, requesting it from the DMG subsystem if data older than the local cache is needed.
- 7.2 The Manage Requests and Responses function shall provide interfaces for forwarding requests of a SYM subsystems to DMG and returning received responses from DMG to the SYM subsystems.

# Detail Level Requirements - SYM\_ManageMonitorData

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## Maintain Local Data Cache

The following section of the document presents the functional and detail level requirements for the *Maintain Local Data Cache (MLDC)* function.

- 7.1.1 The MLDC shall subscribe to the SYM\_Dsd function to receive all state updates as they become available.

(Source: Top-Down Architecture)

- 7.1.2 The MLDC shall store all received state data in a local cache.

(Source: Top-Down Architecture)

- 7.1.3 The MLDC shall retain only the most recent TBD minutes of state data.

(Source: Legacy Reqts PRS TLM107)

- 7.1.4 The MLDC shall process requests, from SYM\_Ref, for recent historical state data from the local cache.

(Source: Top-Down Architecture)

- 7.1.5 The MLDC shall have the capability to retrieve state data from the local cache and store in a data store for SYM\_Ref function use. If the requested data is older than that in the local cache then MLDC shall request data from DMG.

(Source: Top-Down Architecture)

- 7.1.6 The MLDC shall generate event messages for all significant failures and status updates.

(Source: Top-Down Architecture)

- 7.1.6.1 The MLDC shall assign all such event messages a criticality.

7.1.6.2 The MLDC shall send, to the SYM\_ManageEvents function, all such event messages.

## **Manage Requests and Responses**

The following section of the document presents the functional and detail level requirements for the *Manage Requests and Responses (MRR)* function.

7.2.1 The MRR shall forward requests received from SYM subsystems to DMG subsystem for archiving and retrieval of data.

(Source: Top-Down Architecture)

7.2.2 The MRR shall forward responses received from DMG to the SYM subsystems.

(Source: Top-Down Architecture)